



Oh, \$#%*!

Look how big that is.

Risk Management

First rule of the risk

Field Marshal Helmuth von Moltke



OBJECTIVE

- ❑ **Action:** Apply the Risk Management Process
- ❑ **Conditions:** Given handouts, the ITC Instructor Handbook, and a group practical exercise
- ❑ **Standard:** Complete the risk assessment worksheet for the scenario provided and correctly answer questions concerning the risk management process IAW FM 100-14 Risk Management.

PURPOSE

**We are accountable, we
must be responsible**

AGENDA

- ❑ **Identify accident causation factors**
- ❑ **Define key terms used in Risk Management**
- ❑ **Define the five steps of the Risk Management Process**
- ❑ **Conduct a risk assessment practical exercise**

ACCIDENT CAUSE FACTORS

- ❑ Human error**
- ❑ Material failure/malfunction**
- ❑ Environmental factors**

ACCIDENT CAUSE FACTORS SOURCES

- ❑ Individual failure**
- ❑ Leader failure**
- ❑ Training failure**
- ❑ Standards failure**
- ❑ Support failure**

KEY TERMS

□ Risk Management

The process of identifying, assessing, and controlling risks arising from operational factors and making risk decisions that balance risk cost with mission benefits.

FM 100-14

KEY TERMS

Why is Risk Management Important?

Risk Management can empower you to accomplish the mission successfully and to protect our Army from unnecessary losses or mission degradation.

KEY TERMS

- ❑ **Risk level**
- ❑ **Probability**
- ❑ **Severity**
- ❑ **Risk assessment**
- ❑ **Controls**
- ❑ **Residual risk**
- ❑ **Hazard**



HAZARD

Any actual or potential condition that can cause injury, illness, or death of personnel, damage to or loss of equipment, property or mission degradation.

RISK MANAGEMENT PROCESS





**Identify
Hazards**

An aerial photograph of a rural landscape with green fields and small clusters of buildings. Several orange parachutes are visible in the sky, descending from the top of the frame towards the ground. The text is overlaid on the upper portion of the image.

STEP 1:

IDENTIFY HAZARDS

- ❑ **Identify hazards most likely to result in loss of combat power**
- ❑ **Protect the force**



STEP 1:

IDENTIFY HAZARDS

□ **How?**

- **Experience**
- **Brainstorming**
- **Experts**
- **Publications**
- **Accident
information**

BULLETINS

BULLETINS

U.S. Army Special Operations Command



2-96
Aug 96

Fatality Bulletin

U.S. Army Special Operations Command Fatality

During the conduct of a night, jumpmaster directed, Ground Marked Release (GMR), Static-line Airborne Operation a USASOC soldier was fatally injured. The soldier landed in high-tension power lines and suffered electrical injuries. The soldier then fell approximately 40 feet onto a hard surface road and suffered trauma.

The accident investigation revealed numerous violations of USASOC Reg Airborne Operations, dated 1 June 1995.

Lessons learned from this accident:

1. The risk management process must be used throughout the planning phases of all airborne operations. risk management is a living, ongoing process. Commanders must ensure that the risk assessment includes all hazard the drop zone, and that they are identified, and that control measures implemented, and enforced to reduce risk to acceptable levels. If risks cannot be reduced to acceptable levels select alternate DZ's.
2. When planning to use unfamiliar DZ's, commanders must ensure the DZS conducts a thorough ground reconnaissance of the DZ and surrounding area to verify the accuracy of the DZ survey. DZSTLs are required to submit changes to surveys that are inaccurate. All hazards identified must be considered in the assessment and communicated to the airborne commander, jumpmasters, jumpers. Hazards must be marked IAW with USASOC Reg 350-2. Hazards but are not limited to high-tension power lines, bodies of water, trees, road traffic, structures, and equipment on the DZ. Only qualified and current jumpmasters who have received DZSTL training can conduct DZ surveys.
3. Commanders must ensure all required key personnel are qualified, assigned, and present for the operation. Key personnel include the airborne commander, jumpmasters, aircraft safeties, and the DZSO/DZSTL. The DZ party must be tailored, with both personnel and equipment, to safely operate the DZ to be used.

-OVER-

FATALITY BULLETIN

U.S. Army Special Operations Command



Safety Bulletin

06-02
Dec 01

Unexploded Explosive Ordnance (UXO)

USASOC has recently incurred three serious injuries associated with the destruction of UXO munitions. Two of these accidents occurred in CONUS, and one involved an M-72 LAW, which caused the death of an Explosive Ordnance Detachment (EOD) Sergeant that was supporting SOF operations in the training. In each case the proper procedures to destroy the items were followed by the personnel involved in the operation.

"...any explosive ordnance that has been primed, fused, armed or otherwise prepared for action, and fired, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or materiel and unexploded either by malfunction, design, or for any other reason."

The authority to dispose of UXO by SOF personnel is contained in Chapter 8-4, USASOC Reg. 385-1, Accident Prevention and Reporting, dated Apr 00. This regulation states that "Commanders of Special Forces Units may approve the destruction of UXO and only in CONUS locations where EOD personnel are not readily available." Other conditions as specified in USASOC Reg 385-1 have been met. When munitions are encountered within CONUS, or any area where EOD is available, the units should notify the appropriate Range Control Office who will contact EOD to dispose of the UXO.

The task of dealing with UXO begins with the unit's mission planning. The potential for UXO must be considered whenever the training mission involves the use of dud producing weaponry. The best means to prevent UXO occurrences is to ensure that all charges are dual primed. Procedures to destroy UXO should be rehearsed prior to conducting the operation. Local EOD units should be consulted and invited to assist in the conduct of these rehearsals. It is imperative that anyone tasked to dispose of UXO understands the characteristics, stability, and degree of sensitivity regarding the particular

-OVER-

SAFETY BULLETIN

BULLETINS

U.S. Army Special Operations Command



2-96
Aug 96

Fatality Bulletin

U.S. Army Special Operations Command Fatality

During the conduct of a night, jumpmaster directed Ground Marked Release System (GMRS), Static-line Airborne Operation a 11th Airborne Division soldier landed in high-tension power lines, resulting in electrical injuries. The soldier then fell approximately 100 feet from the power lines, struck a surface road and suffered trauma.

The accident investigation identified several violations of USASOC Regulation 350-2, including:

Lessons learned from this incident include:

1. The risk management process must be used throughout the planning and execution phases of all airborne operations. Commanders must ensure that the drop zone, and that the drop zone is properly implemented, and ensure that the drop zone is reduced to acceptable levels.
2. When planning to use a drop zone, the jumpmaster must conduct a thorough ground survey of the accuracy of the DZ, and ensure that the DZ is properly assessed and controlled. Hazards must be identified, but are not limited to high voltage, structures, and other hazards. All personnel who have received DZ training must be present for the operation.
3. Commanders must ensure that the jumpmaster, aircraft, and ground crew are tailored, with both personnel and equipment.

1. The risk management process must be used throughout the planning and execution phases of all ... operations. Risk management is a living, ongoing process. Commanders must ensure that the risk assessment includes all hazards... and that they are identified, and that control measures are

- ❑ **Army Safety Home Page**
(<http://safety.army.mil>)
 - **Army Safety Program**
 - **Army Statistics**
 - **RM Tools**
- ❑ **Risk Management Information System**
(<http://rmis.army.mil>)
 - **Hazards by System**
 - **Accident Overviews**
 - **Database Information**
 - **Messages**
- ❑ **Help Desk**
(helpdesk@safety.emh1.army.mil)
 - **(334) 255-1390 or DSN 558-1390**



STEP 1:

IDENTIFY HAZARDS

□ **METT-TC factors**

Mission

Enemy

**Terrain /
Weather**

Specified & implied

Size & capability

Environmental conditions

An aerial photograph of a rural landscape with green fields and a small village. Several orange parachutes are visible in the sky, suggesting a military exercise or a rescue operation. The text is overlaid on the image.

STEP 1:

IDENTIFY HAZARDS

- ❑ **OCOKA**
 - **Observation & fields of fire**
 - **Cover & concealment**
 - **Obstacles**
 - **Key & decisive terrain**
 - **Avenues of approach**

STEP 1:

IDENTIFY HAZARDS

□ METT-TC factors continued

**Troops /
Equip**

Time

Civilians

**Training & condition
Amount, type, &
condition**

Plan, rehearse, & conduct

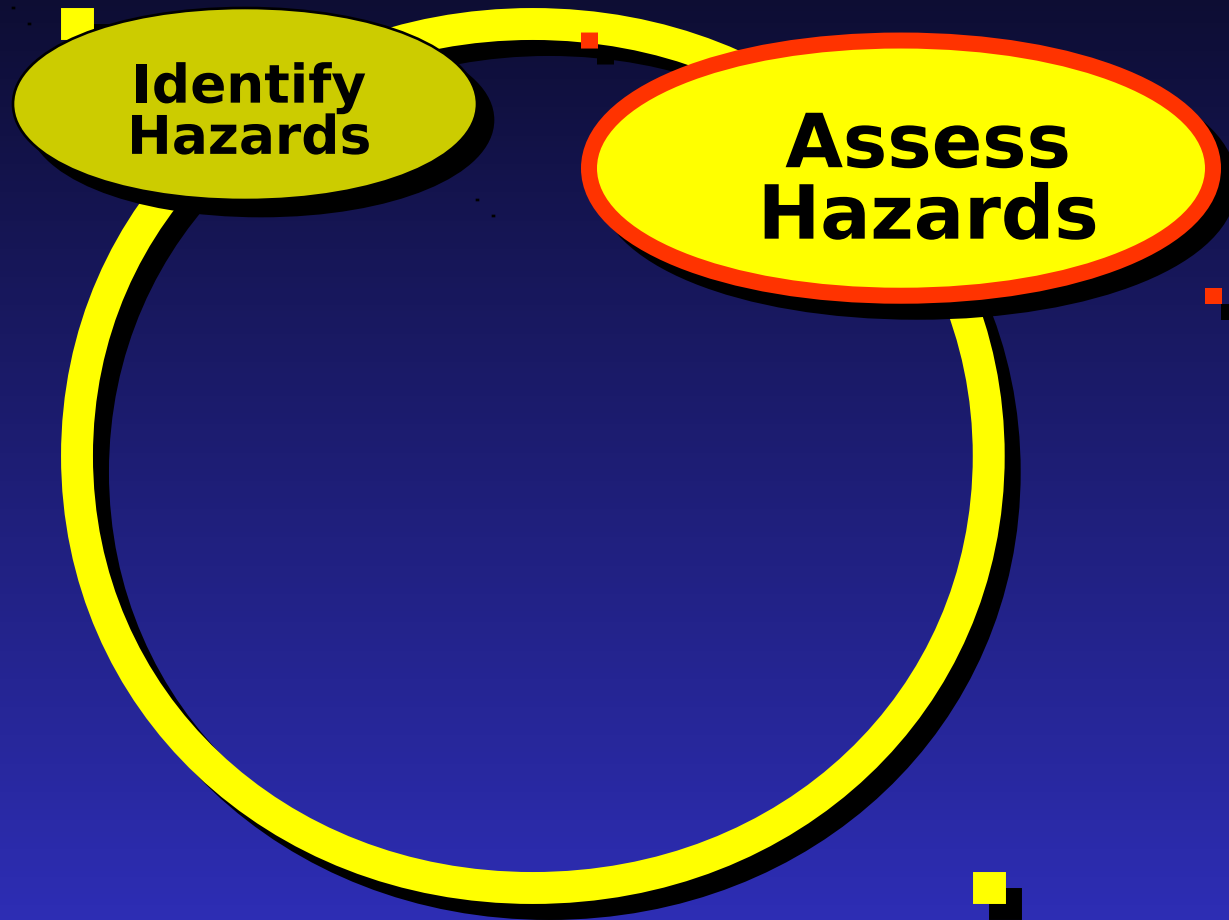
Number, activity, & intent



**Identify
Hazards**

CHECK ON LEARNING

- ❑ **What is a hazard?**
- ❑ **What are some resources we can use to identify hazards?**
- ❑ **How does METT-TC help us identify hazards?**




A large military vehicle, possibly an M1 Abrams tank, is being lifted by a crane in a desert environment. The vehicle is tilted at a steep angle, and the crane's arm is visible on the left. The background shows a vast, arid landscape with mountains in the distance under a clear blue sky.

STEP 2:

ASSESS HAZARDS

□ **Risk Assessment Matrix**

Effects



RISK ASSESSMENT WORKSHEET
(USASOC Reg 385-1)

Activity or Exercise Name:		Organization:			Date:	Prepared By:		Page 1 of
HAZARDS	Probability of Mishap	Effect of Mishap	Risk Level	Controls Implemented		Residual Probability	Residual Effect	Residual Risk Level

RISK ASSESSMENT WORKSHEET
(USASOC Reg 385-1)

Activity or Exercise Name: Live-fire CQC	Organization: 7th SFG(A)	Date: 31 Jan 02	Prepared By: CPT Ron	Page 1 of 2
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HAZARDS	Probability of Mishap	Effect of Mishap	Risk Level	Controls Implemented	Residual Probability	Residual Effect	Residual Risk Level
Injury from fragments created by entry charge upon command detonation	B	II	H				



CHECK ON LEARNING

- ❑ **What makes a hazard extremely high risk?**
- ❑ **A hazard that has critical effect and is seldom encountered has what risk level?**



The background image shows an industrial scene, possibly a refinery or chemical plant. In the foreground, there's a dark, wet surface, likely a road or a pool of liquid. In the middle ground, there are large, dark, irregular shapes that look like piles of material or equipment. In the background, there are tall, thin structures, possibly distillation columns, and a large plume of white smoke or steam rising from the site. The sky is overcast with grey clouds. The overall tone is industrial and somewhat somber.

STEP 3:

DEVELOP CONTROLS & RISK DECISIONS

- ❑ **Types of controls**
 - Educational controls
 - Physical controls
 - Avoidance
- ❑ **Criteria for controls**
 - Suitability
 - Feasibility
 - Acceptability

EXAMPLES OF CONTROLS

- ❑ Select a COA that avoids identified hazard
- ❑ Providing protective clothing, equipment, and safety devices
- ❑ Selecting personnel with appropriate mental, emotional, and physical capabilities

RISK ASSESSMENT WORKSHEET
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Injury from fragments created by entry charge upon command detonation	B	II	H	<ul style="list-style-type: none"> - Students are placed out of line of sight of charge or use blast shields - Instructors wear body armor and other protective equipment 	E	III	L

The background image shows an industrial setting, likely a refinery or chemical plant. In the center, there is a large, cylindrical storage tank. Two workers in full-body protective suits and helmets are visible near the base of the tank, possibly performing maintenance or safety checks. The ground is covered with various pipes, valves, and industrial equipment. The sky is overcast with some clouds. The overall scene conveys a sense of industrial activity and safety protocols.

STEP 3:

DEVELOP CONTROLS & RISK DECISIONS

Risk decisions should be based upon awareness rather than mechanical habit.



STEP 3:

DEVELOP CONTROLS & RISK DECISIONS

- Making the Decisions
 - Is the risk justified?
 - Compare and balance the risk against mission expectations
 - Acceptance of the residual risk

RISK ASSESSMENT WORKSHEET
(USASOC Reg 385-1)

Activity or Exercise Name: Live-fire CQC	Organization: 7th SFG(A)	Date: 31 Jan 02	Prepared By: CPT Ron	Page 1 of 2
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A photograph of a large industrial building, possibly a warehouse or factory, engulfed in flames and thick smoke. Two firefighters in full protective gear are visible in the foreground, working to contain the fire. The scene is set outdoors on a paved area, with a utility pole and power lines visible in the background. The sky is overcast with some light clouds.

**Remember, the key is to specify
who, what, when, where, and
how each control is to be used.**



CHECK ON LEARNING

- ❑ **What are some types of controls?**
- ❑ **What is the criteria for controls?**
- ❑ **What can the CDR do if the controls are inadequate?**





STEP 4:

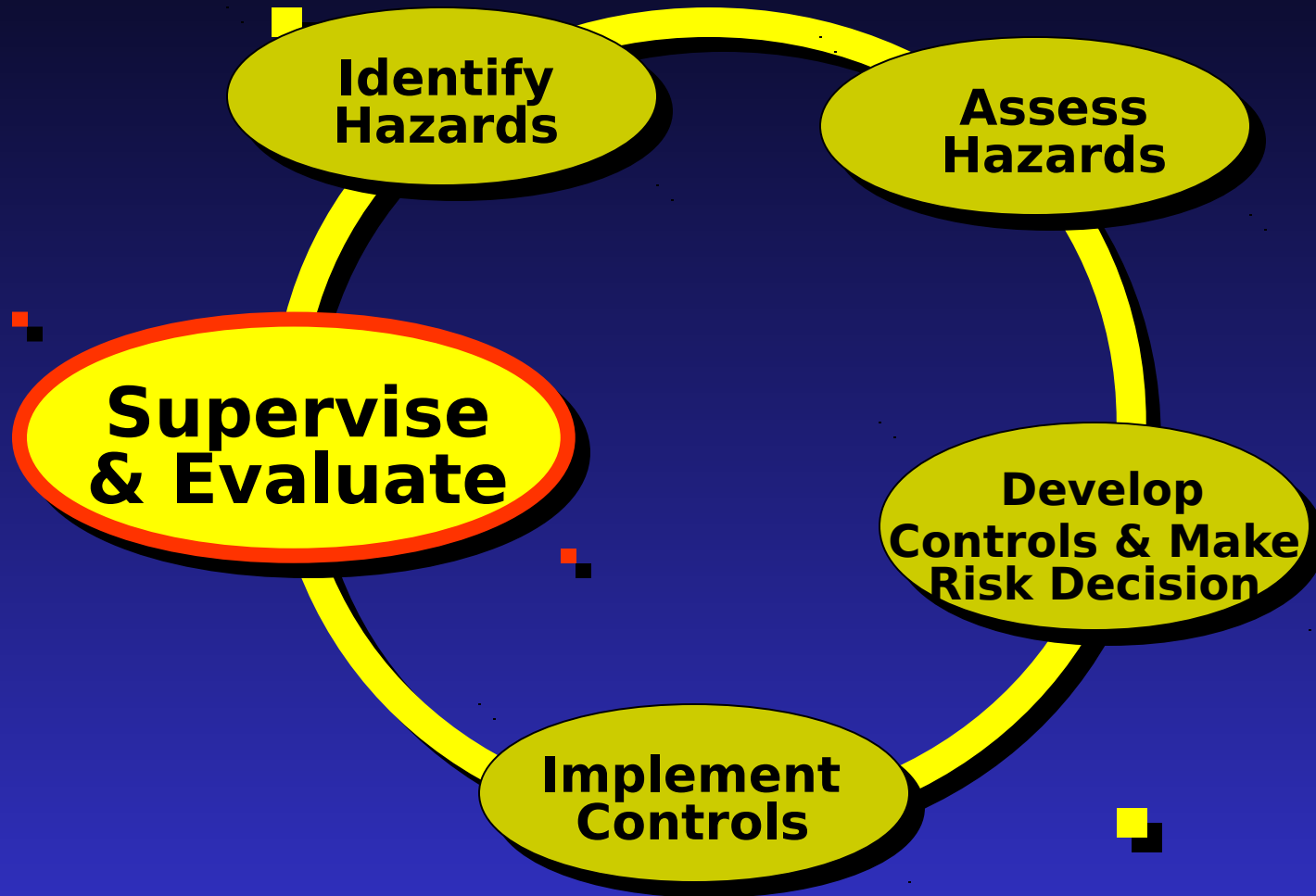
IMPLEMENT CONTROLS

- ❑ **Leaders must ensure that controls are integrated into SOP's, written & verbal orders, mission briefings, and staff estimates**
- ❑ **Includes communication & coordination**



CHECK ON LEARNING

- **Where must we integrate controls?**
- **What can happen to our controls if we don't communicate and coordinate with other units?**



STEP 5:

SUPERVISE & EVALUATE

Leaders must supervise the execution of their orders. The more untrained the troops, the more detailed this supervision must be.

Infantry in

Battle, 1939

STEP 5:

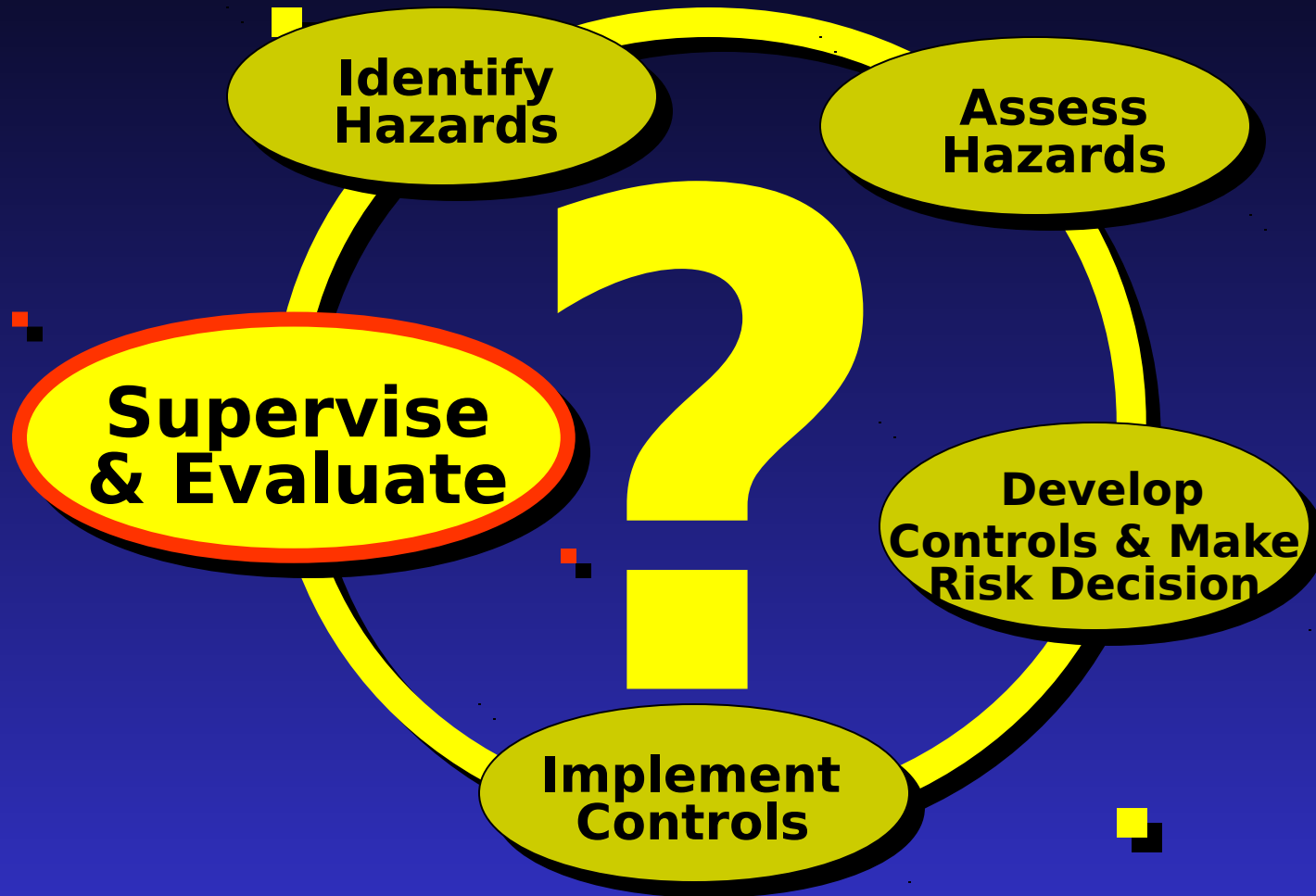
SUPERVISE & EVALUATE

- ❑ **Supervise mission rehearsal & execution**
- ❑ **Monitor and modify controls as necessary**
- ❑ **Avoid complacency**

STEP 5:

SUPERVISE & EVALUATE

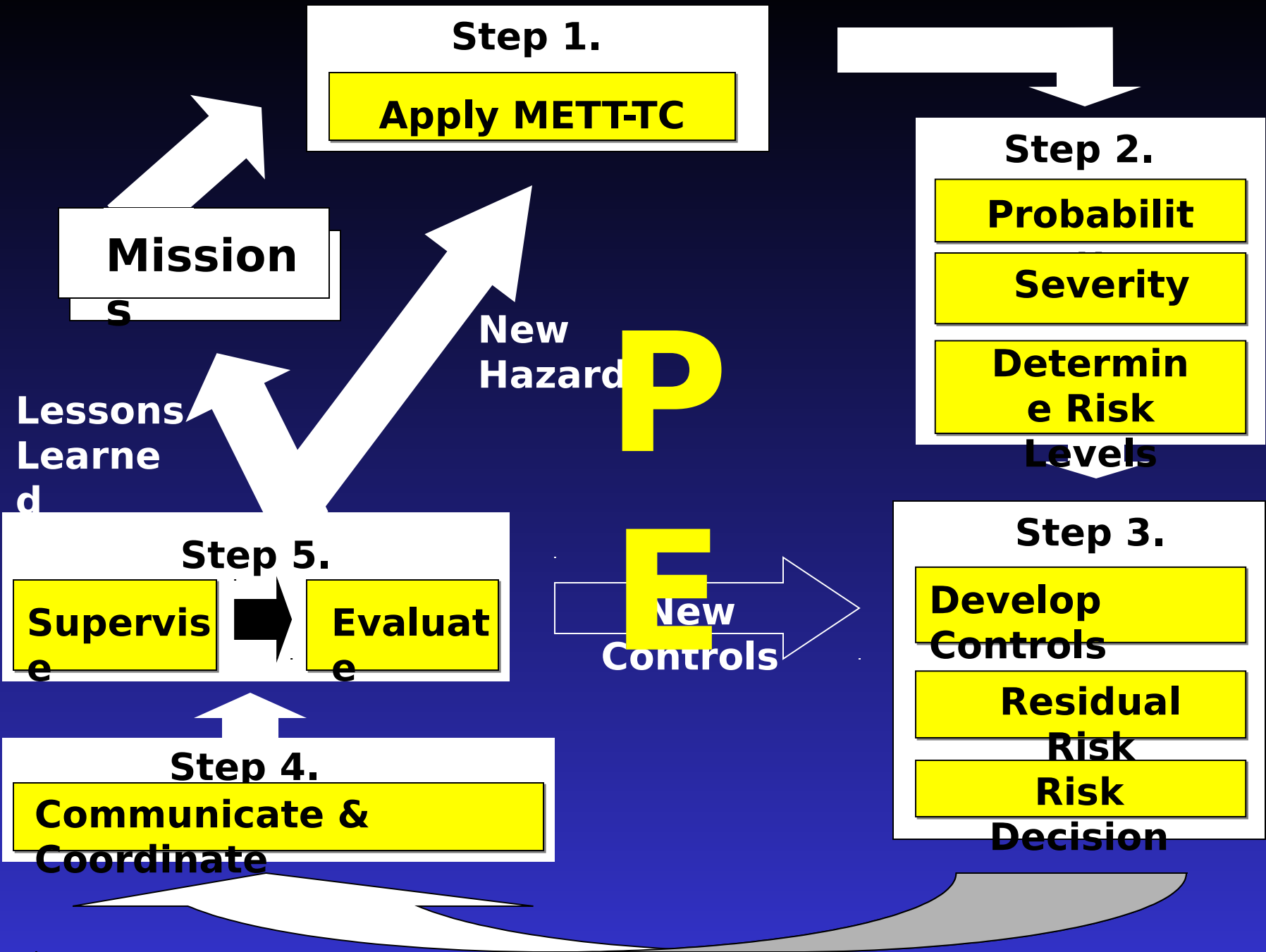
- ❑ Check how well the risk management process was executed**
- ❑ Determine effectiveness of each control**
- ❑ Determine how to ensure successes are continued**
- ❑ Lessons learned**



CHECK ON LEARNING

- **Why must there be supervision?**
- **What do we look for when evaluating?**

RISK MANAGEMENT STEPS APPLIED





OBJECTIVE

- ❑ **Action:** Apply the Risk Management Process
- ❑ **Conditions:** Given handouts, the ITC Instructor Handbook, and a group practical exercise
- ❑ **Standard:** Complete the risk assessment worksheet for the scenario provided and correctly answer questions concerning the risk management process IAW FM 100-14 Risk Management.

REVIEW

- ❑ **What are the three accident cause factors**
- ❑ **What is Risk Management?**
- ❑ **What is a hazard?**
- ❑ **How do we determine risk levels?**
- ❑ **What are physical controls?**

REVIEW

- ❑ **What happens if we find inadequate controls?**
- ❑ **What FM covers Risk Management?**

AGENDA

- ❑ **Identify accident causation factors**
- ❑ **Define key terms used in Risk Management**
- ❑ **Define the five steps of the Risk Management Process**
- ❑ **Conduct a risk assessment practical exercise**

PURPOSE

**We are accountable,
we must be responsible**

The image shows a large, heavily damaged and rusted metal structure, likely a piece of industrial equipment or a vehicle that has been crushed. The structure is composed of various metal plates, beams, and bolts, all of which are heavily corroded and bent. The background is a hazy, overcast sky with some distant hills or mountains visible. The overall scene conveys a sense of decay and exhaustion.

- Take a Break -